

Plumber (General)

(Job Role)

Qualification Pack: Ref. Id. PSC/Q0104

Sector: Plumbing

Textbook for Class X

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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FOREWORD

The National Curriculum Framework–2005 (NCF–2005) recommends bringing work and education into the domain of the curricular, infusing it in all areas of learning while giving it an identity of its own at relevant stages. It explains that work transforms knowledge into experience and generates important personal and social values such as self-reliance, creativity and cooperation. Through work one learns to find one's place in the society. It is an educational activity with an inherent potential for inclusion. Therefore, an experience of involvement in productive work in an educational setting will make one appreciate the worth of social life and what is valued and appreciated in society. Work involves interaction with material or other people (mostly both), thus creating a deeper comprehension and increased practical knowledge of natural substances and social relationships.

Through work and education, school knowledge can be easily linked to learners' life outside the school. This also makes a departure from the legacy of bookish learning and bridges the gap between the school, home, community and the workplace. The NCF–2005 also emphasises on Vocational Education and Training (VET) for all those children who wish to acquire additional skills and/or seek livelihood through vocational education after either discontinuing or completing their school education. VET is expected to provide a 'preferred and dignified' choice rather than a terminal or 'last-resort' option.

As a follow-up of this, NCERT has attempted to infuse work across the subject areas and also contributed in the development of the National Skill Qualification Framework (NSQF) for the country, which was notified on 27 December 2013. It is a quality assurance framework that organises all qualifications according to levels of knowledge, skills and attitude. These levels, graded from one to ten, are defined in terms of learning outcomes, which the learner must possess regardless of whether they are obtained through formal, non-formal or informal learning. The NSQF sets common principles and guidelines for a nationally recognised qualification system covering Schools, Vocational Education and Training Institutions, Technical Education Institutions, Colleges and Universities.

It is under this backdrop that Pandit Sunderlal Sharma Central Institute of Vocational Education (PSSCIVE), Bhopal, a constituent of NCERT has developed learning outcomes based modular curricula for the vocational subjects from Classes IX to XII. This has been developed under the

Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education of the Ministry of Human Resource Development.

This textbook has been developed as per the learning outcomes based curriculum, keeping in view the National Occupational Standards (NOS) for the job role and to promote experiential learning related to the vocation. This will enable the students to acquire necessary skills, knowledge and attitude.

I acknowledge the contribution of the development team, reviewers and all the institutions and organisations, which have supported in the development of this textbook.

NCERT would welcome suggestions from students, teachers and parents, which would help us to further improve the quality of the material in subsequent editions.

New Delhi
June 2018

HRUSHIKESH SENAPATY
Director

National Council of Educational
Research and Training

ABOUT THE TEXTBOOK

Plumber (General) is an important job role in the installation and repair of plumbing fittings and fixtures in 'contractors' segment. This module aims to equip the student with the skills for installation, repair maintenance and servicing of pipes and sanitary fixtures in housing, commercial and institutional setups. A Plumber (General) should be able to work independently on the assignment, and be comfortable in performing laborious work, should be a good listener, good at talking and following instructions, a good team player, result oriented with a positive attitude. After completing this module of Plumber (General), the student will be able to

- understand and use the term plumbing.
- identify power tools used in plumbing and sanitary fixtures.
- install basic plumbing and their maintenance.
- repair construction of basic plumbing.

On completion of this course, a student can take up a higher level course for a job role in the plumbing sector at the diploma and degree level. The textbook for the job role of Plumber (General) has been developed to impart knowledge and skills through hands-on learning experience, which forms a part of experimental learning. Experimental learning focusses on the learning process for the individual; therefore, the learning activities are student-centred rather than teacher-centred.

The textbook has been developed with the contribution of the subject experts, vocational teachers, industry experts and academicians, for making it a useful and inspiring teaching-learning resource material for the vocational students. Adequate care has been taken to align the contents of the textbook with the National Occupational Standards (NOS) for the job role so that the students acquire the necessary knowledge and skills as per the performance criteria mentioned in the respective NOS of the Qualification Pack (QP) PSC/Q0104.

1. PSC/N 0101: Installation of basic sanitary fixtures, fittings, related piping and accessories

2. PSC/N 0102: Repair of basic plumbing systems
3. PSC/N 0115: Installation and repair of advanced sanitary fixtures
4. PSC/N 0108: Coordinating with the seniors and other working team
5. PSC/N 0109: Maintain a healthy, safe and secure working environment

In this textbook, Unit 1 gives an introduction to plumbing operations like cutting, joining, fixing, threading and testing of pipelines. Unit 2 focusses on the plumbing and sanitary fixtures tools used in plumbing. Unit 3 deals with the basic building construction. Unit 4 discusses pumps and their installation. Unit 5 deals with the repairing of plumbing systems. Unit 6 discusses about maintaining a healthy, safe and secure work environment.

This textbook could not have been completed without the support of the Indian Plumbing Skill Council (IPSC), New Delhi. NCERT would like to acknowledge and thank IPSC for giving us the permission to use the pictures in this textbook.

We extend our gratitude to all the contributors for selflessly sharing their precious knowledge, acclaimed expertise and valuable time, and positively responding to our request for development of the textbook.

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Do You Know

According to the 86th Constitutional Amendment Act, 2002, free and compulsory education for all children in 6-14 year age group is now a Fundamental Right under Article 21-A of the Constitution.

**EDUCATION IS NEITHER A
PRIVILEGE NOR FAVOUR BUT A
BASIC HUMAN RIGHT TO
WHICH ALL GIRLS AND WOMEN
ARE ENTITLED**

*Give Girls
Their Chance !*

